



SUBSTITUTE SEQUENCE LISTING

<110> Ottawa Health Research Institute  
<120> Diabetogenic Epitopes  
<130> 034205.003  
<150> PCT/CA05/00025  
<151> 2005-01-10  
<150> US 60/535,278  
<151> 2004-01-09  
<160> 52  
<170> PatentIn version 3.3  
<210> 1  
<211> 10  
<212> PRT  
<213> Artificial  
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<223> Diabetogenic epitope from gliadin protein isoforms or Glb1 based on wheat protein  
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Glu Glu Gln Leu Arg Glu Leu Arg Arg Gln  
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35 40 45

Gln Gln Asp Arg Pro Arg Tyr Ser His Ala Arg Cys Val Gln Glu Cys  
50 55 60

Arg Asp Asp Gln Gln His Gly Arg His Glu Gln Glu Glu Gln Gly  
65 70 75 80

Arg Gly His Gly Arg His Gly Glu Gly Glu Arg Glu Glu Glu Gln Gly  
85 90 95

Arg Gly Arg Gly Arg Arg Gly Gln Gly Glu Arg Glu Glu Glu Gln Gly  
100 105 110

Arg Gly Arg Gly Arg Arg Gly Glu Gly Glu Arg Asp Glu Glu His Gly  
115 120 125

Asp Gly Arg Arg Pro Tyr Val Phe Gly Pro Arg Ser Phe Arg Arg Ile  
130 135 140

Ile Arg Ser Asp His Gly Phe Val Lys Ala Leu Arg Pro Phe Asp Glu  
145 150 155 160

Val Ser Arg Leu Leu Arg Gly Ile Arg Asn Tyr Arg Val Ala Ile Met  
165 170 175

Glu Val Asn Pro Arg Ala Phe Val Val Pro Gly Leu Thr Asp Ala Asp  
180 185 190

Gly Val Gly Tyr Val Ala Gln Gly Glu Gly Val Leu Thr Val Ile Glu  
195 200 205

Asn Gly Glu Lys Arg Ser Tyr Thr Val Arg Gln Gly Asp Val Ile Val  
210 215 220

Ala Pro Ala Gly Ser Ile Met His Leu Ala Asn Thr Asp Gly Arg Arg  
225 230 235 240

Lys Leu Val Ile Ala Lys Ile Leu His Thr Ile Ser Val Pro Gly Lys  
245 250 255

Phe Gln Tyr Phe Ser Ala Lys Pro Leu Leu Ala Ser Leu Ser Lys Arg  
260 265 270

Val Leu Thr Ala Ala Leu Lys Thr Ser Asp Glu Arg Leu Gly Ser Leu  
275 280 285

Leu Gly Ser Arg Gln Gly Lys Glu Glu Glu Lys Ser Ile Ser Ile  
290 295 300

Val Arg Ala Ser Glu Glu Gln Leu Arg Glu Leu Arg Arg Gln Ala Ser  
305 310 315 320

Glu Gly Asp Gln Gly His His Trp Pro Leu Pro Pro Phe Arg Gly Asp  
325 330 335

Ser Arg Asp Thr Phe Asn Leu Leu Glu Gln Arg Pro Lys Ile Ala Asn  
340 345 350

Arg His Gly Arg Leu Tyr Glu Ala Asp Ala Arg Ser Phe His Ala Leu  
355 360 365

Ala Gln His Asp Val Arg Val Ala Val Ala Asn Ile Thr Pro Gly Ser  
370 375 380

Met Thr Ala Pro Tyr Leu Asn Thr Gln Ser Phe Lys Leu Ala Val Val  
385 390 395 400

Leu Glu Gly Glu Gly Glu Val Glu Ile Val Cys Pro His Leu Gly Arg  
405 410 415

Asp Ser Glu Arg Arg Glu Gln Glu His Gly Lys Gly Arg Trp Arg Ser  
420 425 430

Glu Glu Glu Glu Asp Asp Arg Arg Gln Gln Arg Arg Arg Gly Ser Gly  
435 440 445

Ser Glu Ser Glu Glu Glu Gln Asp Gln Gln Arg Tyr Glu Thr Val Arg  
450 455 460

Ala Arg Val Ser Arg Gly Ser Ala Phe Val Val Pro Pro Gly His Pro  
465 470 475 480

Val Val Glu Ile Ala Ser Ser Arg Gly Ser Ser Asn Leu Gln Val Val  
485 490 495

Cys Phe Glu Ile Asn Ala Glu Arg Asn Glu Arg Val Trp Leu Ala Gly  
500 505 510

Arg Asn Asn Val Ile Ala Lys Leu Asp Asp Pro Ala Gln Glu Leu Ala  
515 520 525

Phe Gly Arg Pro Ala Arg Glu Val Gln Glu Val Phe Arg Ala Lys Asp  
530 535 540

Gln Gln Asp Glu Gly Phe Val Ala Gly Pro Glu Gln Gln Gln Glu His  
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Val Glu Ala Phe Leu Arg Met Ala Thr Ala Ala Leu  
580 585

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<223> Alpha/beta-gliadin A-II precursor of wheat protein

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Ala Thr Thr Ala Val Arg Val Pro Val Pro Gln Leu Gln Leu Gln Asn  
20 25 30

Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Glu Gln  
35 40 45

Gln Phe Gln Gly Gln Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro  
50 55 60

Gln Pro Gln Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro  
65 70 75 80

Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln Pro Phe Arg Pro  
85 90 95

Gln Gln Pro Tyr Pro Gln Pro Gln Pro Gln Tyr Ser Gln Pro Gln Gln  
100 105 110

Pro Ile Ser Gln  
115 120 125

Gln Gln Ile Leu Gln Gln Ile Leu Gln Gln Gln Leu Ile Pro Cys Arg  
130 135 140

Asp Val Val Leu Gln Gln His Asn Ile Ala His Gly Ser Ser Gln Val  
145 150 155 160

Leu Gln Glu Ser Thr Tyr Gln Leu Val Gln Gln Leu Cys Cys Gln Gln  
165 170 175

Leu Trp Gln Ile Pro Glu Gln Ser Arg Cys Gln Ala Ile His Asn Val  
180 185 190

Val His Ala Ile Ile Leu His Gln Gln His His His His Gln Gln Gln  
195 200 205

Gln Gln Gln Gln Gln Gln Pro Leu Ser Gln Val Ser Phe Gln Gln  
210 215 220

Pro Gln Gln Gln Tyr Pro Ser Gly Gln Gly Phe Phe Gln Pro Ser Gln  
225 230 235 240

Gln Asn Pro Gln Ala Gln Gly Ser Phe Gln Pro Gln Gln Leu Pro Gln  
245 250 255

Phe Glu Glu Ile Arg Asn Leu Ala Leu Gln Thr Leu Pro Ala Met Cys  
260 265 270

Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile Ala Pro Phe Gly Ile Phe  
275 280 285

Gly Thr Asn  
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<213> Unknown

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<223> Alpha/beta-gliadin MM1 precursor of wheat protein

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Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln  
35 40 45

Gln Phe Pro Gly Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro  
50 55 60

Gln Pro Gln Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro  
65 70 75 80

Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln Leu Pro Tyr Pro  
85 90 95

Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln Pro Phe Arg Pro Gln Gln  
100 105 110

Pro Tyr Pro Gln Ser Gln Pro Gln Tyr Ser Gln Pro Gln Gln Pro Ile  
115 120 125

Ser Gln Lys Gln Gln  
130 135 140

Gln Gln Gln Gln Gln Ile Leu Gln Gln Ile Leu Gln Gln Gln Leu  
145 150 155 160

Ile Pro Cys Arg Asp Val Val Leu Gln Gln His Ser Ile Ala Tyr Gly  
165 170 175

Ser Ser Gln Val Leu Gln Gln Ser Thr Tyr Gln Leu Val Gln Gln Leu  
180 185 190

Cys Cys Gln Gln Leu Trp Gln Ile Pro Glu Gln Ser Arg Cys Gln Ala  
195 200 205

Ile His Asn Val Val His Ala Ile Ile Leu His Gln Gln Gln Gln  
210 215 220

Gln Gln Gln Gln Gln Gln Gln Pro Leu Ser Gln Val Ser Phe Gln Gln  
225 230 235 240

Pro Gln Gln Gln Tyr Pro Ser Gly Gln Gly Ser Phe Gln Pro Ser Gln  
245 250 255

Gln Asn Pro Gln Ala Gln Gly Ser Val Gln Pro Gln Gln Leu Pro Gln  
260 265 270

Phe Glu Glu Ile Arg Asn Leu Ala Leu Glu Thr Leu Pro Ala Met Cys  
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Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile Ala Pro Val Gly Ile Phe  
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Gly Thr Asn  
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Gln Gln Gln Leu Val Pro Gln Leu Gln Gln Pro Leu Ser Gln Gln Pro  
35 40 45

Gln Gln Thr Phe Pro Gln Pro Gln Gln Thr Phe Pro His Gln Pro Gln  
50 55 60

Gln Gln Val Pro Gln Pro Gln Gln Pro Gln Gln Pro Phe Leu Gln Pro  
65 70 75 80

Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln Thr Gln  
85 90 95

Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln  
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Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe  
115 120 125

Pro Gln Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln Leu Gln Gln Pro  
130 135 140

Gln Gln Pro Phe Pro Gln Pro Gln Gln Leu Pro Gln Pro Gln Gln  
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Pro Gln Gln Ser Phe Pro Gln Gln Arg Pro Phe Ile Gln Pro Ser  
165 170 175

Leu Gln Gln Gln Leu Asn Pro Cys Lys Asn Ile Leu Leu Gln Gln Cys  
180 185 190

Lys Pro Ala Ser Leu Val Ser Ser Leu Trp Ser Ile Ile Trp Pro Gln  
195 200 205

Ser Asp Cys Gln Val Met Arg Gln Gln Cys Cys Gln Gln Leu Ala Gln

210

215

220

Ile Pro Gln Gln Leu Gln Cys Ala Ala Ile His Ser Val Val His Ser  
225 230 235 240

Ile Ile Met Gln Gln Gln Gln Gln Gln Gln Gln Gly Met His  
245 250 255

Ile Phe Leu Pro Leu Ser Gln Gln Gln Gln Val Gly Gln Gly Ser Leu  
260 265 270

Val Gln Gly Gln Gly Ile Ile Gln Pro Gln Gln Pro Ala Gln Leu Glu  
275 280 285

Ala Ile Arg Ser Leu Val Leu Gln Thr Leu Pro Ser Met Cys Asn Val  
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Tyr Val Pro Pro Glu Cys Ser Ile Met Arg Ala Pro Phe Ala Ser Ile  
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<213> Triticum aestivum

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Gln Gln Gln Pro Phe Pro Gln Pro Gln Gln Pro Phe Cys Gln Gln Pro  
35 40 45

Gln Gln Thr Ile Pro Gln Pro His Gln Thr Phe His His Gln Pro Gln  
50 55 60

Gln Thr Phe Pro Gln Pro Gln Gln Thr Tyr Pro His Gln Pro Gln Gln  
65 70 75 80

Gln Phe Pro Gln Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln  
85 90 95

Gln Thr Phe Pro Gln Gln Pro Gln Leu Pro Phe Pro Gln Gln Pro Gln  
100 105 110

Gln Pro Phe Pro Gln Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln Ser  
115 120 125

Gln Gln Pro Gln Gln Pro Phe Pro Gln Pro Gln Gln Phe Pro Gln  
130 135 140

Pro Gln Gln Pro Gln Gln Ser Phe Pro Gln Gln Gln Pro Ala Ile  
145 150 155 160

Gln Ser Phe Leu Gln Gln Met Asn Pro Cys Lys Asn Phe Leu Leu  
165 170 175

Gln Gln Cys Asn His Val Ser Leu Val Ser Ser Leu Val Ser Ile Ile  
180 185 190

Leu Pro Arg Ser Asp Cys Gln Val Met Gln Gln Cys Cys Gln Gln  
195 200 205

Leu Ala Gln Ile Pro Gln Gln Leu Gln Cys Ala Ala Ile His Ser Val  
210 215 220

Ala His Ser Ile Ile Met Gln Gln Glu Gln Gln Gln Gly Val Pro Ile  
225 230 235 240

Leu Arg Pro Leu Phe Gln Leu Ala Gln Gly Leu Gly Ile Ile Gln Pro  
245 250 255

Gln Gln Pro Ala Gln Leu Glu Gly Ile Arg Ser Leu Val Leu Lys Thr  
260 265 270

Leu Pro Thr Met Cys Asn Val Tyr Val Pro Pro Asp Cys Ser Thr Ile  
275 280 285

Asn Ile Pro Tyr Ala Asn Ile Asp Ala Gly Ile Gly Gly Gln  
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Leu Arg Arg Gln  
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<210> 13
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<212> PRT
<213> Artificial

<220>
<223> Antigenic WP5212 peptide based on wheat protein

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Arg Gly Asp Glu Ala Val Glu Ala Phe Leu Arg Met Ala Thr Ala
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<220>
<223> Tryptic peptide of wheat protein

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Arg

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Phe Gln Phe Leu Ser Val Lys Pro Leu Leu Ala Ser Leu Ser Lys  
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<223> Tryptic peptide of wheat protein  
  
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Asn Thr Asp Gly Arg  
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<212> PRT  
<213> unknown

<220>  
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<400> 36

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His Leu Gly Arg  
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<210> 37

<211> 19

<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

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Ser Ser Arg

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<211> 19

<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

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His Glu Arg

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<211> 17

<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

<400> 39

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Arg

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<220>  
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<400> 41

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<400> 42

Phe Gln Tyr Phe Ser Ala Lys Pro Leu Leu Ala Ser Leu Ser Lys  
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<210> 43  
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